III. REMARKS

This amendment is made in response to the Office Action mailed September 7, 2004, wherein: (1) Claims 2, 6 and 7 were objected to as informal; (2) Claims 1-7, 9 and 12-14 were rejected under 35 USC § 103(a) as unpatentable over U.S. Patent No. 3,399, 374 (PAUZA et al.) in view of U.S. Patent No 6,280,209 (BASSLER et al.); (3) Claim 11 was rejected under 35 USC § 103(a) as unpatentable over PAUZA et al. in view of BASSLER et al. and further in view of U.S. Patent No. 6,264,501 HUNG et al.); and, (4) Claims 15-17 were indicated as containing allowable subject matter.

By the present amendment, applicants have amended claim 1 and have presented new claims 18-21 for consideration. Reconsideration of this application and entry of this amendment are respectfully requested.

Turning first to the new claims which have been added, claim 18 is directed toward housing segments of different dielectric constants, which will influence the impedance of each the terminal sets within their respective housing segments. Support for this is found on Pages 14 and 15 of the specification. This claims is believed to patentable over the prior art of record in that PAUZA et al. uses two different connector plug bodies without any mention of utilizing the connector plug housings to affect the impedance of the terminals contained within each connector plug body. BASSLER et al. discusses using the spacing and orientation of the terminals in a terminal set to affect the impedance of the terminal set, but is also silent as to using the connector housing or support to achieve the same result. Finally HUNG et al, is also silent to any use of the connector housing to affect any aspect of the terminals. The allowance of this claim is respectfully requested.

New claims 19-21 are the same as original claims 1 and 15-17, which were indicated by the Examiner as containing allowable subject matter. New Claim 19 is a combination of original claims 1, 2 and 15, while new claim 20 is the same as original claim 16 and new claim 21 is the same as original claim 17. The allowance of these claim 19-21 is respectfully requested.

Turning now to the rejections of the claims based upon prior art, claims 1-7, 9 and 12-14 were rejected under 35 USC § 103(a) as unpatentable over PAUZA et al. in view of BASSLER et al. The basis of this rejection is the Examiner's interpretation of PAUZA et al. as showing two inverted connector plug housings 4 and 6 that are inverted with respect to each other and which are held in place within an outer receptacle 2. The Examiner posits that each plug housing of PAUZA et al defines a different terminal set and that BASSLER et al. shows the use

of triad terminal arrangements and that one skilled in the art would be inclined to use differential signal sets as shown in BASSLER et al. in an arrangement fo PAUZA et al.

Applicants have amended claim 1 to recite that each of the terminal sets includes only a pair of differential signal terminals and an associated ground terminal as the terminal set and further that each of the housing segments supports only a single pair of differential signal terminals and its associated ground terminal, and thus the segments may be combined together to form connectors of chosen lengths. In the prior art relied upon by the Examiner, the PAUZA et al. patent shows multiple terminals, none of which are arranged in specific defined sets of terminals. BASSLER et al. merely shows the use of differential signal terminals and associated grounds with other terminals that do not belong within any single differential signal and ground terminal set. Indeed, BASSLER et al. shows, in FIGS. 9A & 9B, multiple other non-differential signal terminals housing in the connector housing, but nowhere is it explained that such terminal may be broken out and away from the differential signal terminals. As such, one skilled in the art would not be inclined as of the filing date of BASSLER et al. to isolate differential signal terminal sets within single housing segments. Indeed, PAUZA et al. describes the locking means on one of the two plug housings as deterring its removal from its outer housing, while permitting the other plug housing to be easily removed from its outer receptacle so that it is insured that only power terminals of the connector are disconnected. This means that the two terminal sets are not identical as they are in the claimed invention, so that only one of the plug housings houses power terminals, while the other terminals are obviously signal terminals or non-power terminals.

Claim 1 has been amended to recite that the distinct terminal sets only comprise two differential signal terminals and one associated ground terminal and that each housing segment supports only a single terminal set. This permits the housing segments to be made of different dielectric materials, if desired to individually control impedance of the terminal sets, as claimed in new claim 18, and it permits the terminal sets to be formed with hermaphroditic housings so that in many instances the cost of the overall connector is reduced. There is no suggestion in any of the prior art of isolating a terminal set in each housing segment nor of isolating triangular arrangements fo terminals in each such housing segment. As such, claims 1-7, 9 and 12-14 are allowable over the prior art of record.

Claim 11 was rejected as obvious in further view of HUNG et al., which shows the use of mortise and tenon engagement members. However, as stated above, the other prior art offers no

suggestion to separate the terminal sets into triangular sets of three terminals, each set of which is supported in a separate housing segment. Thus, claim 19 should also be allowable.

A favorable response is respectfully solicited.

Respectfully submitted,

MOLEX INCORPORATED

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By: _____

Thomas D. Paulius
Registration No. 30,792

2222 Wellington Court
Lisle, Illinois 60532
Tel.: (630) 527-4897